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ABSTRACT

This paper looks at the issues and problems involved in the evaluation of competency-based teacher education programs. A major fallacy of CBTE programs is that they are based on the following implicit assumptions which have little theoretical or empirical support: (a) that there is much more agreement than the literature indicates on the goals and purposes of education, the competencies derived from these goals, and the timing and sequence of pupil competencies; and (b) that is a specific set of goals and objectives could be agreed upon, a valid set of corresponding teacher competencies could then be derived which promote these objectives. Evaluation of CBTE programs presents a second series of problems which include level of competence measured, the relationship of the measure to the particular competency, quality of the evidence, and isolation of factors which contribute to the achievement of the competencies. Despite these limitations, the University of California at Berkeley CBTE Programs will attempt to evaluate their programs in terms of the achievement of objectives and competencies, ongoing processes by which objectives are achieved, unplanned outcomes, and student background. This information will be analyzed and summarized in periodic reports. (PB)

EVALUATION OF TEACHER EDUCATION PROGRAMS:

ISSUES & RATIONALE

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The purposes of this paper are (1) to examine some of the conceptual and practical issues involved in the evaluation of teacher education programs and (2) to present a framework and rationale for the procedures to be used in designing the evaluation of the Teacher Education Programs at University of California at Berkeley.

ISSUES & PROBLEMS

There are many issues and problems involved in the evaluation of Teacher Education. Only two types of issues will be considered in this paper:

- (1) issues inherent in competency based teacher education programs; and
- (2) problems relating to the measurement and assessment of competency based programs.

Problems of Competency Based Teacher Education Programs

A major fallacy of Competency Based Teacher Education Programs (CBTE) is that these programs are based on two types of implicit assumptions which have little theoretical or empirical support.

Assumptions regarding Theoretical Support

CBTE programs assume, first of all, that there is much more agreement than the literature indicates on (1) the goals and purposes of education, (2) the competencies derived from these goals, and (3) the timing and sequence of pupil competencies.

Goals and purposes of education. In their excellent analysis of the aims of education, Kohlberg and Mayer (1972) contrast three different

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educational ideologies: (1) a "progressive" model whose goal is to promote the attainment of higher levels of cognitive, moral, and ego development. (2) a "romantic" model, which stresses mental health and happiness; and (3) a "cultural transmission" model whose purpose is to transmit the knowledge, skills, and rules of the culture. Each of these ideologies is based on a different set of values and on a different conception of what society needs and what is good for children. As a consequence, there is little commonality among the primary goals and objectives of the three models.

Competencies derived from goals. Advocates of each of these models would establish different types of educational programs based on the specific goals and objectives of the particular model of education. A different set of pupil competencies could then be derived from the particular model. Similarly, a specific set of teacher competencies could be generated appropriate to the particular model. These teacher competencies would be expected to promote the achievement of the particular pupil competencies. For example, where the transmission of such cultural skills as reading and computation is the purpose of education, the teacher should be competent primarily in teaching specific language, reading, and mathematical skills. In contrast, teachers whose aim is to promote the highest possible levels of cognitive, moral, and ego development--as described in the "progressive model"--would need to acquire a set of teaching competencies which would include sensitivity in detecting stages of development and strategies to promote higher levels of development for each individual. Measuring the achievement of these pupil competencies would provide evidence as to whether the objectives of the model had been met.

Thus, an application of Kohlberg and Mayer's review to the field of

competency based teacher education illustrates that there are at least three viewpoints on the aims of education, yielding three conceptions of the most important competencies for teachers to acquire in order to promote optimal learning for their pupils.

However, it might also be possible to select a number of goals and competencies from each of these models in an eclectic fashion. Such a selection would result in a fourth educational model and a fourth set of competencies. It is conceivable, furthermore, that additional models which do not necessarily overlap with the first three models could be postulated and that competencies could then be derived from the goals of these new models. Nevertheless, any new model requires an explicitly stated rationale, based either on theory or on research.

Timing and sequence of competencies. In addition to the different conceptions of pupil competencies and the corresponding teacher competencies required as evidence of achievement of the objectives of each model, a further point of disagreement among educators concerns the most appropriate timing and sequence for the achievement of particular competencies. Some educators have questioned the sequence of learning particular skills within general subject matter areas, such as math. Others, such as Rohwer (1973) have questioned the efficiency of learning basic reading skills in the primary grades. Rohwer proposes instead that the achievement of competence in reading and math skills be postponed until the intermediate (junior high) years. If this proposal were enacted, it would mean that teachers of pre-teen and adolescent children would need to be competent in teaching basic reading and math skills and that teachers of young children should be competent in guiding exploration and interpersonal relations rather than

primarily in instructing basic math and reading skills as is the current practice.

These differing opinions regarding the timing and sequence of skill learning and their implications for teacher training have not been considered by many competency based teacher education programs.

Assumptions regarding Empirical Support

Despite the fact that there seems to be divergent viewpoints concerning the purposes of education and the competencies necessary for achieving the varying purposes of education, competency based teacher education programs have been established. In some cases, the competencies required may indeed be derived from a particular education ideology. In other cases, the philosophical and conceptual basis for specifying a particular set of teacher competencies does not appear to have been clearly articulated.

In either of these cases, the establishment of competency based teacher education programs proceeds under a second unexamined assumption. This second assumption--implicit in CBTE Programs and implicit in the preceding discussion--is that if a specific set of goals and objectives could indeed be agreed upon, a valid set of corresponding teacher competencies could then be derived which promote these specified objectives. Unfortunately, however, reviews of the available research reveal few teaching strategies which have been consistently identified with specific pupil outcomes generalizable across pupil populations (Combs, 1965; Rosenshine and Furst, 1973). The effectiveness of specific teaching strategies seems to vary according to a number of variables. For example, some researchers (e.g. Brophy and Evertson, 1974) have found that the effectiveness of teaching strategies depends on the socioeconomic and cultural group of the pupils. Certain

strategies were found to be more efficient with lower class pupils, while a different set was shown to be effective for middle class pupils. The personality of the particular pupils seems also to contribute to the effectiveness of particular teaching strategies (e.g. Solomon, 1974). And so on. In other words, even if there were agreement as to what the aim of education should be, there is little research evidence which clearly and consistently links the achievement of pupil competencies to specific teaching strategies (teacher competencies). A stronger case could be made to support the establishment of CBTE Programs if a firmer foundation of empirical research existed.

Problems of Measurement and Assessment

Regardless of the issues of the importance of particular teaching competencies, the evaluation of any CBTE Program presents a second series of problems. This series of problems includes (1) the level of competence measured, (2) the relationship of the measure to the particular competency, (3) the quality of the evidence, and (4) isolation of factors--both within a program and beyond the program--which contribute to the achievement of the competencies. (Traditional measurement problems, such as reliability and validity, will not be explored here.)

Level of Competence Measured

The first of these problems concerns the levels of educational objectives (see Bloom, 1956) and the criterion used for the selection of the means of measurement. If one criterion for the selection of measures of competencies is the technical sophistication of the measurement, means of measuring competencies may be limited to the knowledge level measured by traditional paper and pencil tests. However, it is likely that the higher cognitive levels of application

of knowledge and the evaluation of the application are more appropriate for purposes of achieving competent teaching than knowledge alone. Techniques for the measurement of these higher levels of educational objectives--e.g. classroom observation methods--are less refined but nevertheless may be more appropriate for the purpose of the evaluation of actual teaching performance.

Relationship between Competency and Evidence

A second measurement problem also related to that of the level of educational objectives is the relationship between the particular competency and the particular behavior stipulated as evidence of that competency. The problem is one of whether or not the behavior required as evidence of a competency is indeed directly related to the competency for which it is supposed to be evidence. For example, in a competency based program, knowledge of black dialect as measured by a multiple choice test may be stipulated as the required evidence of knowledge of cross-cultural variations in the teaching situation. A high score on this test may yield evidence of awareness of black language at the knowledge level. However, this evidence--even at the knowledge level--may be an inadequate indication of the individual's awareness of black culture in the broader sense as it applies to the teaching situation. At this time, there seems to be a general paucity of established relationships between competencies and specified behavioral evidence.

Standards of Quality

The third measurement problem concerns the distinction between a minimum or minimally adequate standard of performance and the quality of competence deemed acceptable. For example, as evidence of the student teacher's ability to diagnose skill levels, prescribe suitable lessons, and enhance a pupil's self-concept, a "child study" report may be required. One student

teacher may have diagnosed and prescribed adequately and concluded that the pupil's self-concept was enhanced by this skill learning. Another student teacher may do much more than the first by creating materials for the pupil which integrate the pupil's own interests and ethnic background with the particular skills needed by this pupil for growth in skills and self-concept. The first student's report may meet a minimally adequate standard of performance; yet the quality of the second student's report is clearly superior. Because the use of competencies usually does not discriminate qualitative differences in performance, it is important to establish minimum standards of performance at a sufficiently high level of quality. This issue reflects a concern with the training of teachers who are highly qualified as opposed to teachers who are minimally competent.

Factors contributing to the Achievement of Competence

The fourth problem of measurement and assessment centers on the identification and isolation of factors which contribute to the effectiveness of the program. These factors include program components such as course work and student teaching as well as non-program components, such as student teacher's personality, prior knowledge, and those competencies acquired through such extra-program sources as colleagues and in-service courses. On one hand, it may be that the knowledge or skills acquired from any one source--internal or external to the program--may contribute to the achievement of competencies in such small degrees that the accretion of knowledge from any one source is immeasurable. On the other hand, it may be that it is largely non-program factors, such as the personality, attitude, and prior experience of the student teacher, that determine whether or not competencies are achieved. The process of selecting student teacher candidates may be the crucial factor in

whether or not the program is effective. It is possible that non-program factors--either (1) those with which the student enters, (2) those which are acquired concurrently with the teacher training program, or (3) those learned subsequent to the teacher training year--are the major determinants of effective teaching. Or any of these non-program factors may interact with the components of a particular program to produce effective teaching. The process of unraveling the tangled web of contributing and interacting factors seems overwhelming.

The possible contribution of non-program factors--either alone or in interaction--becomes even more cogent in evaluating the effectiveness of the program graduates in follow-up studies, since the number of non-program factors which may possibly affect a teacher's effectiveness increases. The administration, school morale, type of pupil population, school program limitations, availability of supplies, class size, and so on, are added to the already complicated list.

RATIONALE FOR PROCEDURES OF PROGRAM EVALUATION

Despite the limitations and reservations concerning competency based teacher education programs and the questions concerning the measurement of these competencies, California's Ryan Commission Guidelines require competency based teacher education programs as well as both a formative and a summative evaluation of all approved teacher education programs.

Focus of Evaluation

The University of California at Berkeley CBTE Teacher Education Programs as approved by the CTPL are described in the Professional Preparation of

Teachers (Ryan Document). The issue of the value or worth of stated objectives--noted in the first section--is considered by some to be a part of the purpose and function of evaluation (Worthen & Sanders, 1973). Nevertheless, the evaluation of the University of California Teacher Education programs will not focus at this point on the issue of whether or not objectives stated in the Ryan Document are "good" for elementary or secondary students nor on the problem of whether the competencies required by the programs are facilitative of particular goals. Instead, the primary thrust of the Evaluation will be on the achievement of the objectives and competencies stated in the Ryan Document (and the general and specific conditions stipulated by the CTPL).

To this end, information will be sought, where possible, concerning (1) the achievement of the objectives and competencies, (2) ongoing processes by which the objectives are achieved, (3) unplanned outcomes, and (4) the background of the students.

Information regarding Objectives and Competencies

The first type of information to be sought pertains to the achievement of the objectives and competencies as perceived by those involved in the program. Included will be information regarding whether or not a precisely specified set of competencies required for program completion is clearly stated. For example, is there a clear understanding of the minimum number and level of competencies which need to be achieved?

Information concerning the appropriateness of the modes and levels used to assess competence--noted in the section on measurement problems--will also be gathered. For example, were the behaviors required as evidence of competence seen by those involved as valid evidence of these competencies?

Was the evidence at the knowledge or the application level? Was the standard of performance of an adequate quality?

Information regarding Ongoing Processes

A second type of information to be collected concerns the ongoing functioning of the programs. Information regarding the procedures, processes, and events as they occur will serve three purposes. First, this descriptive information will contribute to an understanding of the functioning of the program. Knowledge of values and patterns of interactions within the program will enable the Evaluators to make an analysis of the types of processes that facilitate or hinder the ongoing functioning of the program. Hopefully, this understanding by individuals outside the program yet friendly to it will permit feedback and suggestions which will lead to program improvement (Horrocks, 1973).

Secondly, information concerning ongoing processes will overcome what Horrocks & Jones (1973) have called the "risk of appraising a non-event". That is, information concerning what actually did happen will avoid attributing certain outcomes to events that did not occur as planned. Knowing what actually happened may provide some indication of the contribution of each of the program components to the effectiveness of the programs.

Thirdly, information regarding the ongoing functioning of the program may provide some indication of the contribution of each of the components of the program to the overall effectiveness of the programs.

Information regarding Unplanned Outcomes

Information of a more general nature will be sought for purposes of what Scriven has called "goal-free" evaluation. Questions beyond the specific goals and objectives of the programs will be posed to determine positive or

negative "side effects" of the program. For example, Did the program enhance the self-confidence of the candidate? Were certain goals and competencies achieved at the expense of the desire to become a teacher?

Information regarding the Background of the Student

The collection of information concerning the students' backgrounds, their reasons for choosing the particular teacher education program, and a self-assessment of entering knowledge or behaviors will provide (1) evidence as to the similarity or differences in populations of the students from the different teacher education programs, (2) some indication of the contribution of entering personal qualities and skills to the achievement of competencies, and (3) a rough "pre-measure" to be utilized in later assessments of growth. In future years, use of a measure of attitude towards self and teaching should be considered as a further source of explaining outcomes.

Data Collection and Reporting Procedures

The information outlined above will be collected from Student Teachers, Master Teachers, Supervisors, and Instructors periodically throughout the year by means of formal questionnaires and interviews as well as class visits, informal contacts, and meetings with all of those involved in the programs.

The information collected by these means will be analyzed and summarized. Periodic reports will be made on both an informal and a formal basis to those involved in the program.

Because the purposes of the Evaluation are formative as well as summative, an attempt is being made to utilize procedures which will both

(1) facilitate the use of the information in ongoing program improvement and (2) allow individuals involved in the programs to suggest areas for investigation in the subsequent sequence of data collection and feedback. Therefore, information will be reported informally to those involved in the particular programs as a part of a two-way process of continuing feedback and responses between the Evaluation Unit and Program Participants.

Formal reports will be made quarterly to the Teacher Education Division and to the CTPL in accordance with policies ultimately established.

Plans will be formulated for a follow-up of a representative sample of Program Graduates into their first few years of teaching--as required by the Ryan Act. Input into the design of the follow-up study will be sought from those involved in the programs.

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